The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte
BJORN LIEDTKE, JOACHIM GORDT, ULRICH SPEER,
JAMES WISE, WILFRED SCHULL, and HANS-GERD ESSER

Appeal 2007-2084
Application 10/018,144
Technology Center 1700

Decided: July 31, 2007

Before TONI R. SCHEINER, ERIC GRIMES, and
RICHARD M. LEBOVITZ, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to methods and apparatuses for producing data carriers. The Examiner has rejected the claims as anticipated and obvious. We have jurisdiction under 35 U.S.C. § 6(b). We affirm the rejection of all the claims except claim 61.

BACKGROUND

"[D]ata carriers are, for example, optical recording media such as DVDs, etc., that comprise at least two substrates adhered to one another" (Specification 1). The substrates may be "adhered to one another by applying to a first substrate a film that is coated on two sides with adhesive, aligning a second substrate with respect to the first substrate, and joining the substrates" (*id.* at 2). One drawback to using adhesive film is "the risk that air bubbles that have a negative impact on the quality of the data carrier can be trapped between the substrate and the adhesive film. In addition, the process for applying the adhesive film is very time-consuming . . ." (*id.*).

The Specification discloses "an apparatus and a method that make it possible to produce a high-quality data carrier simply and cost-effectively, in particular without trapping any air. The object of the present invention is furthermore to decrease the processing times required for adhering two substrates" (*id.* at 2-3).

DISCUSSION

1. CLAIMS

Claims 32-40 and 43-62 are on appeal.[1] Claims 32 and 51 are representative, and read as follows:

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[1] Claim 42 is also pending. The Appeal Brief filed November 20, 2006, lists claim 42 among the appealed claims, and the cover sheet to the appealed Final Rejection (mailed April 19, 2005) states that claim 42 is rejected. However, claim 42 is not included in any of the rejections in the appealed Final Rejection, or in the Examiner's Answer of December 18, 2006. Because claim 42 was not addressed in any appealed rejection, it is not on appeal.

> 32. A method of producing a data carrier by adhering at least two substrates to one another, said method including the steps of:
>
> providing a first substrate;
>
> pressing an adhesive film, which is adhesive on two sides, against said first substrate via a rotating pressure roller by moving said first substrate linearly past said pressure roller, wherein such movement extends parallel to a surface of said first substrate;
>
> aligning a second substrate relative to said first substrate; and
>
> joining said first and second substrates together.
>
> 51. An apparatus for producing a data carrier having at least two substrates that are adhered to one another, comprising:
>
> a laminating station for applying to a first substrate an adhesive film that is adhesive on two sides, wherein said laminating station comprises a rotatable pressure roller and a device for moving said first substrate linearly past said pressure roller during lamination, wherein such movement extends parallel to a surface of said first substrate; and
>
> a substrate adhering station for aligning and joining said first substrate and a second substrate together.

Thus, claim 32 is directed to a process of making a data carrier. An adhesive film having adhesive on two sides is pressed onto a first substrate by a rotating pressure roller by moving the substrate linearly past the pressure roller, in a direction parallel to the substrate's surface. A second substrate is aligned with the first substrate, and the two substrates are joined together.

Claim 51 is essentially directed to an apparatus for performing the process of claim 32. The apparatus has a laminating station capable of applying a two-sided adhesive film to a first substrate. The laminating

station has a pressure roller and a device that can move the substrate linearly past the pressure roller in a direction parallel to the substrate's surface. The apparatus also has a station for aligning and joining the first substrate to a second substrate.

2. PRIOR ART

The Examiner relies on the following references:

Deurer	US 5,891,290	Apr. 6, 1999
Kashiwagi	JP 11-126377 (as translated)	May 11, 1999
Nakamura	US 6,004,420	Dec. 21, 1999
Amo	US 6,200,402 B1	Mar. 13, 2001

3. ANTICIPATION

Claims 51-55 and 62 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Kashiwagi (Answer 4-5).[2]

The Examiner states that Figures 1, 5, and 14 of Kashiwagi disclose an apparatus "for bonding two substrates together including a lamination station for applying a first substrate (101) with a film (112). The station includes a pressure roller (51) with the substrate (101) being advanced linearly past the roller (51) during lamination. The substrate adhering station occurs later and includes a pressure pad (208)" (*id.* at 4).

The Examiner urges that the adhesive film recited in claim 51 does not add any structural features to the claim because it is merely the "material worked upon" (*id.*). Because Kashiwagi's apparatus is capable of handling a film that is adhesive on both sides, the Examiner argues, the apparatus meets all of the structural features of claim 51 (*id.*).

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[2] Examiner's Answer mailed December 18, 2006.

Appellants argue that Kashiwagi does not disclose every element recited in the claim because it "does not disclose nor even suggest a lamination station capable of applying double-sided adhesive film to substrates" (Br. 8).[3] Rather, Appellants argue, Kashiwagi is directed to an apparatus in which an adhesive agent of uniform thickness is placed on an information signal layer, followed by a cementing layer, followed by a transparent film (*id.*). Appellants argue that the adhesives are disclosed as "flow[ing]" and having viscosity, and are therefore liquid rather than a two-sided film (*id.* at 8-9). Appellants argue that because Kashiwagi discloses using a liquid adhesive to apply the transparent film, Kashiwagi "actually teaches away from the present Application's laminating station for applying to a first substrate an adhesive film that is adhesive on two sides" (*id.* at 9).

We are not persuaded by these arguments. While we agree that a reference must explicitly or inherently disclose every limitation to anticipate a claim, "[a] reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. *Thus, the question whether a reference 'teaches away' from the invention is inapplicable to an anticipation analysis.*" *Celeritas Techs. Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998) (emphasis added).

The apparatus recited in claim 51 has "a laminating station for applying to a first substrate an adhesive film that is adhesive on two sides." The laminating station has two components, a rotatable pressure roller and a device for moving the substrate linearly past the pressure roller in a direction parallel to the surface of the substrate.

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[3] Appeal Brief filed November 20, 2006.

Figure 5 of Kashiwagi shows a laminating station having a "sticking-by-pressure roller 51 arranged along the transit way of a film 112" (Kashiwagi, [0019]), meeting the limitation of claim 551 of a "rotatable pressure roller." Kashiwagi discloses that the film 112 and substrate 101 are "made to run . . . at the same rate, as shown in drawing 5(a)" (*id.* at [0035]). As shown by the arrows indicating the horizontal motion of both the film 112 and supported substrate 101 in Figure 5, both the film 112 and substrate 101 are moved in a direction linearly past the pressure roller 51, and in a direction parallel to the substrate's surface by the rollers 42 and 45 (*id.* at 34). Kashiwagi therefore meets all of the structural limitations on the laminating station recited in claim 51.

We agree with Appellants that Kashiwagi discloses gluing the film to the substrate with a liquid adhesive, rather than using a double-sided adhesive film. However, we do not agree that Kashiwagi's use of a liquid adhesive means that Kashiwagi fails to anticipate claim 51. An apparatus capable of performing an intended use will anticipate an apparatus claim, even if the prior art does not disclose that the apparatus was actually put to the intended use recited in the claim. *See, In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997); *see also In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) (When claims are directed to an apparatus or machine "[t]he manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself.").

Kashiwagi's laminating station moves a film 112 and a substrate 101 linearly past a pressure roller 51 at the same rate (*see* Kashiwagi, Figure 5).

We agree with the Examiner that it is reasonable to conclude that the device would be capable of moving a double-sided adhesive film past the pressure roller in the same manner, and thereby attach the film to the substrate. We do not see, and Appellants do not point to, anything in the reference suggesting that Kashiwagi's apparatus would be incapable of performing such a process. We therefore agree with the Examiner that Kashiwagi discloses an apparatus having a laminating station that meets all of the structural limitations in claim 51 and is capable of carrying out the recited function.

We also agree with the Examiner that Kashiwagi discloses a substrate adhering station capable of aligning and joining a first and second substrate. Kashiwagi's Figure 14 shows a station for preparing a "double-sided disk" in which two previously laminated disks are glued together using an "ultraviolet-rays hardening resin 207" (Kashiwagi [0085]). Kashiwagi states that after the resin 207 is irradiated, "it is stuck by pressure with the sticking-by-pressure pad (or sticking-by-pressure roll) 208" (*id.* at [0086]). Because Kashiwagi discloses an apparatus meeting all of the structural limitations of claim 51, and is capable of performing the recited function, we agree with the Examiner that Kashiwagi anticipates claim 51.

Appellants argue that "the present situation is clearly distinguishable" from the cases cited by the Examiner because the applicant in *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. Pat. App. Int. 1969), "was attempting to achieve the same results as the there existing patent but sought protection in a method claim instead of an apparatus claim" (Br. 10). In contrast, Appellants argue, the claimed apparatus has a "laminating station [that] is a

specialized one capable of applying a double-sided adhesive film" whereas Kashiwagi discloses applying a liquid adhesive to a substrate, and therefore "does not disclose any laminating station, by its own description, capable of applying a double-sided adhesive film (*id.*).

We do not agree that *Thibault* is distinguishable from the instant situation. In *Thibault*, the Board listed claim 1, directed to a method, and claim 11, directed to a formaldehyde formulation, as representative claims. 164 USPQ at 666-667. The Board also addressed the merits of claim 12, and stated:

> If *the apparatus as claimed* is not fully described in Walker (35 U.S.C. 102), it differs so little therefrom as to be obvious to the designer of apparatus. The purpose to which the apparatus is to be put and the numerous expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.

Thibault, 164 USPQ at 667 (emphasis added). Thus, when the Board stated that an intended use of an apparatus has no bearing on the patentability of the apparatus, the Board was indeed referring to an apparatus claim.

Moreover, as discussed above, we agree with the Examiner that Kashiwagi's device is capable of performing the recited function of applying a two-sided adhesive to a substrate. Therefore, because Kashiwagi's device also meets all of the structural limitations of claim 51, we affirm the Examiner's rejection of claim 51 as being anticipated by Kashiwagi. Because they were not argued separately, claims 52-55 and 62 fall with claim 51. 37 C.F.R. § 41.37(c)(1)(vii).

4. OBVIOUSNESS -- CLAIMS 32-35, 37, 38, 40, 43, 44, 46, 48, AND 50

Claims 32-35, 37, 38, 40, 43, 44, 46, 48, and 50 stand rejected under 35 U.S.C. § 103 as being obvious over Amo and Kashiwagi (Answer 5-7).

The Examiner cites Amo as disclosing a method for laminating disc shaped substrates in which an adhesive film is pressed onto a first substrate by a roller that moves in relation to the substrate (*id.* at 5-6). The Examiner concedes that "Amo does not teach moving the substrate during lamination" (*id.* at 6). To meet this deficiency, the Examiner urges that pressing the film onto the substrate by moving the substrate past the pressure roller would have been "an obvious alterative to having the pressure roller move past the substrate . . . because the two actions are functionally equivalent" (*id.*). The Examiner argues that "[o]ne of ordinary skill in the art would [have] appreciated that they could either move the roller past the substrate or the substrate past the roller[;] they are equivalent actions and the resulting lamination between the film and the substrate would be the same" (*id.*).

Appellants argue that claim 32 "is not obvious over Amo in view of [Kashiwagi] since there is no suggestion or motivation to modify the teachings of either reference to make the specific combination that was made by the Applicant" (Br. 13). Appellants argue that the rejection is therefore improper because "[t]he Examiner has not referenced any such teaching or suggestion, but instead has said that the two actions are functionally equivalent expedients" (*id.* at 14).

We are not persuaded by these arguments. The Supreme Court recently cautioned that "[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or

by overemphasis on the importance of published articles and the explicit content of issued patents." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007). The Court thus reaffirmed "that when a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." *Id.* at 1740, 82 USPQ2d at 1395-96 (quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976)).

The Court also stated that it is obvious to choose from among known equivalents:

> When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that is was obvious under § 103.

Id. at 1742, 82 USPQ2d at 1397.

In the instant case Amo discloses a process for laminating disc-shaped substrates (Amo, abstract). Amo discloses that the first disc-shaped substrate is placed on a holding table, and "the adhesive sheet body S receives a pressing force between the holding table 2 and pressing body 1 so as to allow the adhesive agent S2 to be bonded onto the surface of the lower disc-shaped substrate D1 . . ." (*id.* at col. 7, ll. 20-24; *see also* Figures 5 and 6). Amo states that to press the adhesive sheet onto the substrate D1, a "laminating roller 1 can roll and move, by a driving apparatus (not shown),

in parallel with the adhesive sheet body S while it presses the lower disc-shaped substrate D1" (*id.* at col. 8, ll., 32-34; *see also* Figure 6).

Once the adhesive is pressed onto the first disc substrate and release paper is removed from the top of the adhesive, the second disc is aligned and "the laminating roller 1 . . . press[es] the upper disc-shaped substrate D2 in the manner so that the contact portion (pressing portion) between itself and the lower disc-shaped substrate D1 increases gradually from the central portion to the outer portion (radially)" (*id.* at col. 12, l. 66, to col. 13, l. 3). Amo discloses that by using this technique "air bubbles or the like are not contained between the lower disc-shaped substrate D1 and upper disc-shaped substrate D2" (*id.* at col. 13, ll. 3-6).

Based on these teachings, we agree with the Examiner that Amo differs from claim 32 only in that Amo using a moving roller to press the adhesive film onto the lower disc, rather than moving the substrate and film past a stationary roller. However, Kashiwagi discloses that a film can be adhered to a disc-shaped substrate by "run[ning] a film 112 and a substrate 101 at the same rate, as shown in drawing 5(a)," past a "sticking-by-pressure roller 51" (Kashiwagi [0035]). Thus, one of ordinary skill would have recognized from Kashiwagi that, as an alternative to using a moving roller, Amo's adherent film could be pressed onto the substrate in an equivalent manner by moving the film and substrate past a pressure roller. We agree with the Examiner that one of ordinary skill would have considered claim 32 obvious in view of these teachings.

Appellants argue that "[t]he Examiner's references may both be in the broad field of the manufacture of optical discs, however, the areas of art she

seeks to combine differ enough that combination would not be obvious" (Br. 14). We do not agree. As stated in *In re Clay*, 966 F.2d 656, 658-59, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992), the two criteria for evaluating whether a reference is sufficiently analogous to the invention are "(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved."

Kashiwagi discloses methods by which a transparent film is adhered to an optical disc substrate (Kashiwagi, [Means for Solving the Problem]). We agree with the Examiner that one of ordinary skill would have considered those teachings pertinent to Amo's methods, which are also directed to adhering a film to a disc-shaped substrate. Moreover, as the Supreme Court recently noted, "[a] person of ordinary skill is . . . a person of ordinary creativity, not an automaton." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007). The analysis under 35 U.S.C. § 103 therefore "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 1741, 82 USPQ2d at 1396. In our view, one of ordinary skill viewing the teachings of the cited references would have recognized that Kashiwagi's use of a non-moving pressure roller would have been suitable for use in pressing Amo's adhesive film onto the substrate.

Appellants argue that

> it is not clear from [Kashiwagi] just how the laminating station does function, and whether during the laminating process the

> substrate is moved by a device past a pressure roller and is moved parallel to the surface of the substrate. . . . [Kashiwagi] never discloses a laminating film, and there is no teaching or suggestion to use one.

(Br. 14-15).

We are not persuaded by these arguments. While the translation of Kashiwagi is not as clear as it could be, we agree with the Examiner that the Kashiwagi's teachings would have been sufficiently clear to one of ordinary skill in the art to render claim 32 obvious.

Kashiwagi states that "[i]t is made to run *a film* 112 and a substrate 101 *at the same rate*, as shown in drawing 5(a)," past a "sticking-by-pressure roller 51" (Kashiwagi [0035], emphasis added). Figure 5(a) has arrows showing motion of both the supported substrate and the film. Figure 5(c) shows sequential positions of the supported substrate 101 as it passes the adhesive applicator 31, pressure roller 51, and subsequent processing stations 52 and 53. Thus, Kashiwagi discloses the relevant limitations of claim 32 with sufficient clarity.

We affirm the Examiner's rejection of claim 32 as obvious over Amo and Kashiwagi. Because claims 33-35, 37, 38, 40, 41, 43, 44, 46, 48, and 50 were not argued separately, they fall with claim 32. 37 C.F.R. § 41.37(c)(1)(vii).

5. OBVIOUSNESS -- CLAIM 36

Claim 36 stands rejected under 35 U.S.C. § 103 as obvious over Amo, Kashiwagi, and Deurer (Answer 7). Claim 36 ultimately depends from claim 32, and recites that "sections of said adhesive film that correspond to a shape and size of said first and second substrate are punched onto said carrier film."

The Examiner cites Deurer as "placing or 'punching' sections (10) cut out from one film (20) onto a carrier film (21)" (*id.*). The Examiner concludes:

> It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the adhesive film in Amo onto the carrier means by a means similar to that in Deurer, because the embodiment in Deurer is well known in the art. Furthermore, it is within the purview of the artisan to look to a reference like Deurer to determine how the film in Amo is created.

(*Id.*)

Appellants argue that "Deurer in no way suggests any relation to the field of optical disc manufacture. There is no teaching or suggestion within Deurer or . . . Amo or [Kashiwagi] to combine any of [] them to achieve the invention of Claim 36 of the present application" (Br. 16). Appellants argue that the references therefore can only be combined through improper hindsight (*id.*).

We are not persuaded by these arguments. Deurer discloses methods by which sections of a self-adhesive material in desired shapes are moved from a first moving web onto a second moving web (Deurer, abstract). Deurer discloses that to accomplish this "cuts must be made such that the unnecessary self-adhesive material forms a coherent lattice which is peeled off immediately after the sections have been punched out. The desired scrapless sections may then easily be released by means of a conventional dispensing edge" (*id.* at col. 1, ll. 18-22)

Amo's process requires placement of a correctly shaped piece of adhesive film onto a disc-shaped substrate. Figure 20(A) of Amo shows a series of disc-shaped pieces of adhesive film S2/S3 on the carrier material

S1. We agree with the Examiner that one of ordinary skill would have considered it obvious to "punch" Amo's series of disc-shaped pieces of adhesive film onto the carrier, and remove the unused portion of the film, by a method such as Deurer's.

We note that Deurer's methods are directed to "the manufacture of transdermal therapeutic systems" having "rectangular or square forms" (Deurer, col. 2, ll. 54-56). However, as discussed above, even if a reference is not directed to the same field of endeavor as the invention, it is still relevant to the patentability of the claim if it "is reasonably pertinent to the particular problem with which the inventor is involved." *In re Clay*, 966 at 659, 23 USPQ2d at 1060.

Because Deurer discloses methods by which an adhesive film can be made into a series of specific desired shapes and placed onto a moving carrier, we agree with the Examiner that Deurer, like Amo, is reasonably pertinent to the problem involved in the claimed invention. Moreover, as the Supreme Court recently stated, "a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR,* 127 S. Ct. at 1741, 82 USPQ2d at 1396. In our view, one of ordinary skill viewing Amo's Figure 20(A) would have recognized that the series of adhesive discs could be "punched" onto the moving carrier material by any suitable method, including that disclosed in Deurer. We therefore affirm the Examiner's rejection of claim 36.

6. OBVIOUSNESS -- CLAIM 39

Claim 39 stands rejected under 35 U.S.C. § 103 as obvious over Amo and Kashiwagi (Answer 7). Claim 39 recites "[a] method according to claim

32, which includes the step of controlling a pressure of said pressure roller." The Examiner states that one of ordinary skill would have considered it obvious to control the pressure applied by Amo's roller, "because it is within the purview of the artisan to add a control feature to prevent possible damage that too [much] pressure can cause. Alternatively, if too little pressure is applied, then the film is not applied properly to the substrate and a defective product is created" (*id.* at 8).

We agree with the Examiner that it would have been obvious to control the pressure exerted by the pressure roller on the film and substrate. We therefore also agree with the Examiner that claim 39 would have been obvious in view of Amo and Kashiwagi.

Appellants did not argue claim 39 separately (see Br. 11). Thus, Appellants do not dispute the reasonableness of the Examiner's conclusions regarding the desirability of controlling the pressure applied to the adhesive film and substrate. We therefore affirm the Examiner's rejection of claim 39 as obvious over Amo and Kashiwagi.

7. OBVIOUSNESS -- CLAIM 45

Claim 45 stands rejected under 35 U.S.C. § 103 as obvious over Amo, Kashiwagi, and Nakamura (Answer 8). Claim 45 recites a "method according to claim 32, wherein said step of joining said first and second substrates together is effected in a vacuum."

The Examiner states that one of ordinary skill would have considered it obvious "to include a vacuum in the bonding step in Amo, because Nakamura shows that it is well known in the art to bond substrates together in a vacuum. Furthermore, an artisan would know that a vacuum condition

would prevent contaminants from interfering with the bonding process" (*id.*).

Appellants argue that "[t]here is no teaching or suggestion within Nakamura '420 or . . . Amo or [Kashiwagi] to combine any of [] them to achieve the invention of Claim 45 of the present application. As a result, the combination can only be improper hindsight" (Br. 17).

We are not persuaded by Appellants' argument. As discussed above, the Supreme Court recently reaffirmed the idea "that when a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." *KSR*, 127 S. Ct at 1740, 82 USPQ2d at 1395-96 (quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976)).

Nakamura describes "an optical disk producing apparatus . . . shown in FIG. 16 . . . [that] comprises . . . a vacuum presser 48 . . . . The two disk substrates 46 are bonded through an adhesive double coated sheet 51 by means of vacuum pressing" (Nakamura, col. 1, ll. 31-46). Thus, one of ordinary skill would have recognized that Nakamura's vacuum pressing technique would be suitable for pressing together the two disc substrates in Amo's process. Because claim 45 recites an arrangement of old elements with each element carrying out its known prior art function, we agree with the Examiner that one of ordinary skill would have considered claim 45 obvious over the cited references. We therefore affirm the Examiner's rejection of claim 45.

8. OBVIOUSNESS -- CLAIMS 47 AND 49

Claims 47 and 49 stand rejected under 35 U.S.C. § 103 as obvious over Amo and Kashiwagi (Answer 9.) Claim 47 ultimately depends from claim 32, and "includes the step of controlling a pressure exerted upon said first and second substrates." For the reasons discussed above, we agree with the Examiner that one of ordinary skill would have considered it obvious to control the pressure exerted on the two substrates, in order to avoid disc damage, yet ensure adequate bonding.

Appellants do not separately argue claims 47 and 49 (see Br. 11). Thus, Appellants do not dispute the reasonableness of the Examiner's conclusions regarding the desirability of controlling the pressure applied to the two substrates. We therefore affirm the Examiner's rejection of claim 47 as obvious over Amo and Kashiwagi. Claim 49 falls with claim 47. 37 C.F.R. § 41.37(c)(1)(vii).

9. OBVIOUSNESS -- CLAIMS 56-59

Claims 56-59 stand rejected under 35 U.S.C. § 103 as obvious over Kashiwagi and Nakamura (Answer 9). Claim 56 is representative of this ground of rejection, and recites an apparatus "according to claim 51, wherein a centering and holding device is provided that in a first position holds said first and second substrates spaced apart and in a second position enables a centered joining of said first and second substrates."

The Examiner states that Kashiwagi does not "detail the manner in which the substrates are pressed together. However, it would have been obvious to one having ordinary skill in the art at the time the invention was

made based on Figure 14 that the substrates are held apart and then pressed together in a centered manner" (*id.*).

We agree. Figure 14 of Kashiwagi shows the production of a "double-sided disk" (Kashiwagi [0085]). Figure 14(a) shows two disk-shaped substrates 101 in a spaced apart orientation, each substrate having "ultraviolet-rays hardening resin 207" applied to its back (*id.*). Figure 14(b) shows the two substrates being stuck together "by pressure with the sticking-by-pressure pad (or sticking-by-pressure roll) 208" (*id.* at [0086]). As is evident from Figure 14(b), the two substrates are aligned when being bonded together. We agree with the Examiner that one of ordinary skill would have recognized that to make a double-sided disk, the two disk-shaped substrates of Kashiwagi would have to be properly aligned when bonded together. We therefore also agree with the Examiner that, in view of the actions required to make the double sided disk shown in Figure 14, one of ordinary skill would have considered it obvious to equip Kashiwagi's apparatus with a centering device enabling centered joining of the two substrates.

Appellants argue that claim 51 is not obvious over Kashiwagi or Nakamura "since there is no suggestion or motivation to modify the teachings of either reference to make the specific combination that was made by the applicant" (Br. 19), but for the reasons discussed above, we agree with the Examiner that Kashiwagi anticipates claim 51.

Appellants also argue that while Kashiwagi and Nakamura are both directed to the manufacture of optical discs, the references "differ enough that combination would not be obvious" because Kashiwagi applies a liquid adhesive rather than a film, and because it is not clear how Kashiwagi's

laminating station works (Br. 20). Appellants urge that the asserted combination of references would only be made through inappropriate hindsight (*id.*).

We are not persuaded by these arguments. As discussed above, Kashiwagi states that the laminating station runs "*a film* 112 and a substrate 101 *at the same rate*, as shown in drawing 5(a)," past a "sticking-by-pressure roller 51" (Kashiwagi [0035], emphasis added). From this description, and the process shown in Figure 5, we do not agree that Kashiwagi lacks sufficient clarity regarding how the laminating station works. Moreover, for the reasons discussed above, we agree with the Examiner that one of ordinary skill, recognizing that preparing Kashiwagi's double-sided disk would require aligning the two disks for bonding, would have considered it obvious to equip Kashiwagi's apparatus with the centering device recited in 56.

We therefore affirm the Examiner's rejection of claim 56 as obvious over Kashiwagi and Nakamura. Because claims 57-59 were not argued separately, those claims fall with claim 56. 37 C.F.R. § 41.37(c)(1)(vii).

10. OBVIOUSNESS -- CLAIM 60

Claim 60 stands rejected under 35 U.S.C. § 103 as being obvious over Kashiwagi, Nakamura, and Amo (Answer 10). Claim 60 ultimately depends from claim 51, and recites an apparatus having a "pressure ram [that] is provided with an element for actuating and centering said holding device between said first and second positions."

The Examiner states that "the pressure pad (208) in [Kashiwagi] is not detailed as including a centering and holding device" (*id.*). The Examiner

concludes, however, that one of ordinary skill would have considered it obvious "to have [a] centering and holding device to achieve the proper substrate bonding. This is shown in Figures 16 and 17 of Amo. No actuating device is disclosed in Amo, but it is inherent that an actuating device exists to achieve the movement shown in the Figures" (*id.*).

We agree with the Examiner. As discussed above, Figure 14 of Kashiwagi shows the production of a "double-sided disk" (Kashiwagi [0085]). Figure 14(a) shows two disk-shaped substrates 101 in a spaced apart orientation, each substrate having "ultraviolet-rays hardening resin 207" applied to its back (*id.*). Figure 14(b) shows the two substrates being stuck together "by pressure with the sticking-by-pressure pad (or sticking-by-pressure roll) 208" (*id.* at [0086]). As is evident from Figure 14(b), the two substrates are aligned when being bonded together.

For the reasons discussed above regarding claim 56, we agree with the Examiner that one of ordinary skill would have considered it obvious to equip Kashiwagi's apparatus with a centering device enabling centered joining of the two substrates, as recited in claim 60.

Appellants reassert their previous arguments with respect to the combination of the cited references, and further assert that there is "no teaching or suggestion within Nakamura [] or the Amo or [Kashiwagi] references to combine any of them to achieve the invention of [c]laim 60 of the present application. As a result, the combination can only be improper hindsight" (Br. 21-22).

We are not persuaded by these arguments. As discussed above, one of ordinary skill would have considered it obvious to provide Kashiwagi's

pressure pad with a centering element as recited in claim 60. We affirm the rejection of claim 60.

11. OBVIOUSNESS -- CLAIM 61

Claim 61 stands rejected under 35 U.S.C. § 103 as being obvious over Kashiwagi. The Examiner states that one of ordinary skill would have considered it obvious "to include compressed air in the bonding station to assist in the bonding process, because using compressed air could speed up the bonding process and has less chance of harming the substrates than the pressure the ram would place on it" (Answer 11).

Appellants argue that Kashiwagi "does not in any way disclose the compressed air of [c]laim 61" (Br. 22).

We will reverse this rejection. The Examiner has not provided any evidence supporting the assertion that compressed air would increase the bonding rate between the two substrates that make up the double sided disk shown in Kashiwagi's Figure 14 or lessen the risk of harming the substrate.

Because the Examiner has not provided actual evidence, such as prior art, to support the assertions critical to the rejection of claim 61, we reverse the obviousness rejection of that claim.

OTHER ISSUES

Item 6 of the cover sheet to the Final Rejection of April 19, 2005, states that claim 42 is rejected. However, claim 42 is not included in any of the rejections advanced by the Examiner. When prosecution resumes the Examiner should clarify this issue.

SUMMARY

We affirm all of the Examiner's rejections except the rejection of claim 61 as obvious over Kashiwagi.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

Ssc

ROBERT W. BECKER & ASSOCIATES
707 HIGHWAY 333
SUITE B
TIJERAS, NM 87059-7507